

WHAT IS CLAIMED IS:

1. A generator set assembly comprising:
  - an alternator;
  - an engine coupled to the alternator and capable of transmitting rotational energy to the alternator;
  - 5 a base; and
  - a plurality of engine mounting components positioned between the base and the engine,
    - wherein at least a first of the engine mounting components includes:
      - 10 a first rigid portion capable of being fixedly coupled to the engine;
      - a second rigid portion capable of being fixedly coupled to the base component;
      - 15 a flexible intermediate portion coupled between the first and second rigid portions that allows relative movement of the first and second rigid portions to occur in response to expansion and contraction of the engine during operation of the engine; and
    - 20 a further component extending between the first and second rigid portions through the flexible intermediate portion,
      - wherein the further component is capable of limiting relative movement of the first and second rigid portions.
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2. The generator set assembly of claim 2,
  - wherein at least a second of the mounting components is positioned at a rear end of the engine proximate to the alternator, and wherein the first mounting component is positioned at a front end of the engine.
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3. The generator set assembly of claim 2,  
wherein a third of the mounting components is positioned  
at the rear end of the engine and a fourth of the mounting  
components is positioned at the front end of the engine.
  
4. The generator set assembly of claim 3,  
wherein the base includes a pair of skid rails, wherein  
the first and second mounting components are mounted upon the  
first skid rail, and wherein the third and fourth mounting  
5 components are mounted upon the second skid rail.
  
5. The generator set assembly of claim 4, wherein the base  
further includes a foundation, and wherein the skid rails are  
mounted upon the foundation by way of additional mounting  
components selected from the group consisting of rigid  
5 mounting components, rubberized mounting components,  
elastomeric mounting components, and spring-type mounting  
components.
  
6. The generator set assembly of claim 5, wherein at least  
one of the mounting components provides at least some  
reduction in an amount of vibrations transmitted from the  
engine to at least a portion of the base.
  
7. The generator set assembly of claim 1, wherein the  
intermediate portion includes a first channel portion, wherein  
the second rigid portion includes a second channel portion,  
and wherein the first and second channel portions are at least  
5 partly aligned with one another to form an overall channel,  
and wherein the further component extends through the overall  
channel.
  
8. The generator set assembly of claim 7, wherein the  
further component has an outer diameter that is less than an  
inner diameter of the overall channel, so that a limited

amount of relative shearing movement of the first and second  
5 rigid portions can be accommodated by the flexible intermediate portion, the limited amount being determined at least in part by a difference between the inner and outer diameters.

9. The generator set assembly of claim 8, wherein the further component includes a bolt and a sleeve, wherein the outer diameter is that of the sleeve, wherein positioned between the sleeve and the first rigid portion is a shoulder  
5 of the intermediate flexible portion that extends inward toward the bolt beyond the inner diameter, and wherein the sleeve assists in maintaining the intermediate flexible portion in position adjacent to the first rigid portion.

10. The generator set assembly of claim 9, wherein the intermediate flexible portion includes a first rigid plate and a second rigid plate that are fixed in position on first and second sides of a rubberized portion in between the rubberized  
5 portion and the first and second rigid portions, respectively, and wherein the second rigid plate includes a further channel portion that is part of the first channel portion.

11. The generator set assembly of claim 10, wherein the further component includes a threaded bolt and a threaded nut that is positioned onto the bolt adjacent to the first rigid plate so that the first rigid plate is held against the first  
5 rigid portion.

12. The generator set assembly of claim 7, wherein the further component includes a shaft portion that extends out of the overall channel beyond a surface of the second rigid portion and additionally includes a protrusion extending  
5 radially outward from a central axis of the shaft portion

beyond an outer diameter of the shaft portion and further beyond an inner diameter of the overall channel.

13. The generator set assembly of claim 12, wherein the protrusion is positioned along the shaft portion at a location beyond the surface so that a limited amount of movement of the first and second rigid portions toward and away from one another can be accommodated by the intermediate flexible portion, wherein the first and second rigid portions have moved apart from one another by a maximum amount when the surface of the second rigid portion encounters the protrusion.  
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14. The generator set assembly of claim 13, wherein the protrusion is a washer positioned onto the shaft portion against a sleeve extending along the shaft portion and into the overall channel, the washer being held against the sleeve by way of an additional nut.  
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15. The generator set assembly of claim 13, wherein the protrusion is integrally formed with the shaft portion of the further component, wherein the further component extends into a cavity within the second rigid portion.

16. The generator set assembly of claim 13, wherein the second rigid portion is precluded from moving beyond the maximum amount away from the first rigid portion by the protrusion even when the flexible intermediate portion is unable to provide additional resistance to movement beyond the maximum amount.  
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17. A mounting component for mounting an engine onto a base, the mounting component comprising:

    a first rigid portion capable of being fixedly coupled to the engine;

5        a second rigid portion capable of being fixedly coupled  
to the base;

10      an intermediate portion coupled between the first and  
second rigid portions, wherein the intermediate portion is  
formed at least in part from a flexible material so that the  
intermediate portion is capable of allowing relative movement  
of the first and second rigid portions; and

15      an additional component coupled to one of the first and  
second rigid portions and extending through the intermediate  
portion and through at least a portion of the other of the  
first and second rigid portions and beyond a surface of the  
other rigid portion,

20      wherein the additional component is capable of  
interacting with at least one of the intermediate portion and  
the other rigid portion so that at least one of relative  
shearing movement between the first and second rigid portions  
and relative movement of the first and second rigid portions  
apart from one another is limited.

18. The mounting component of claim 17, wherein each of the  
intermediate portion and the other rigid portion includes a  
respective channel portion that together form a channel having  
an inner diameter, and wherein the additional component  
5 includes a shaft extending through the channel and having an  
outer diameter that is less than the inner diameter, so that  
the relative shearing movement of the first and second rigid  
portions can be accommodated by the intermediate portion up to  
a point at which the shaft encounters the channel.

19. The mounting component of claim 18, wherein the  
additional component includes a means for restricting movement  
of the other rigid portion away from the one rigid portion.

20. A method of mounting an engine of a generator set to a base so that the engine can expand and contract during operation as a temperature of the engine changes without producing excessive stresses upon mounting components

5 supporting the engine with respect to the base, the method comprising:

providing a mounting component having first and second rigid components attached on opposite sides of a flexible intermediate component, and further having an additional 10 component extending from the one of the first and second rigid components through a channel within the intermediate component and at least a portion of the other of the first and second rigid components, the additional component extending beyond a surface of the other rigid component and having a shaft that 15 extends through the channel and has an outer diameter that is less than an inner diameter of the channel;

fixedly coupling the second rigid component to the base; and

fixedly coupling the first rigid component to the engine.

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21. The method of claim 20, wherein the additional component includes a protrusion at a location on the shaft that is beyond the surface, wherein the protrusion extends outward from the shaft beyond the inner diameter, and wherein the 5 protrusion limits movement of the rigid components apart from one another.